

REMARKS

Applicant and the undersigned wish to thank Examiner Moorthy for his time and attention during the telephonic interview conducted on March 30, 2005. As agreed during the interview, the pending claims patentably distinguish over the cited references. As this amendment adds no new subject matter to the claims, no additional search should be required. Therefore, Applicant requests this application be passed on to allowance without delay. However, should any additional action be deemed necessary, Applicant appreciates Examiner Moorthy's agreement to contact the undersigned prior to issuing any further Office Actions.

The following summarizes the Applicant's position discussed during the interview. The application relates to methods, communication routers, and software intended to reduce the dangers of untrusted parties gaining control of network routers. After Applicant's current amendment to claim 34, each and every independent claim specifically recites a determination that an untrusted party is controlling or has gained control of a functioning router or a signal indicating such determination. The cited references, however, are completely silent with respect to untrusted party control of functioning routers.

The Claims Patentably Distinguish Over Rubino and the Cited Combinations, Thereof

Claims 1–15 and 17–36 are rejected under 35 USC 102(e) over U.S. Patent No. 6,424,629 to Rubino et al. ("Rubino"), or under 35 USC 103(a) over Rubino in view of additional references. For each rejection, the Action asserts that Rubino demonstrates a prior teaching or suggestion in the art of a signal which indicates that an untrusted party either is controlling, or has taken control, of a functioning router. Applicant disagrees.

More particularly, independent claims 1, 7, 24–27, 32, and 35 are rejected under 35 USC §102(e). The Action suggests that Rubino discloses a signal indicating untrusted party router control in the following passage:

In a typical embodiment utilizing connectivity verification, the local ATM router 102 is able to determine the status of the PVC 110 by periodically transmitting the End-to-End Loopback signal 116 and monitoring for the return End-to-End Loopback signal 122. Specifically, the local ATM router 102 is able to determine that the PVC failed upon transmitting the End-to-End Loopback signal 116 and failing to receive the return End-to-End Loopback signal 122. Thereafter, the local ATM router 102 continues periodically transmitting the End-to-End Loopback signal 116 and monitoring for the return End-to-End Loopback signal 122. As long as the local ATM router 102 fails to receive the return End-to-End Loopback signal 122 in response to the End-to-End Loopback signal 116, the local ATM router 102 is able to determine that the PVC failure 112 persists. However, if the local ATM router 102 receives the return End-to-End Loopback signal 122 in response to the End-to-End Loopback signal 116, then the local ATM router 102 is able to determine that the PVC failure 112 has been resolved.

Column 8, lines 15–34. This passage discloses a router sending an End-to-End Loopback signal and awaiting a response to determine if a permanent virtual circuit (PVC) failure persists. The passage fails to disclose that the End-to-End Loopback signal or the return End-to-End Loopback signal indicate who, if anyone, controls a router. In fact, the passage fails to disclose an untrusted party's existence, at all. Thus, Applicant requests reconsideration of and withdrawal of the § 102 rejections to claims 1, 7, 24–27, 32, and 35. Claims 2–6, 8–15, 28–31, and 36 depend from claims 1, 7, 27, and 35, respectively, and add further limitations thereto. Applicant therefore requests reconsideration and withdrawal of the §102 rejection of claims 2–6, 8, 15, 28–31, and 36, too.

Independent claims 17 and 22 are rejected under 35 USC 103(a) over Rubino in view of U.S. Patent No. 4,947,430 to Chaum (“Chaum”). For the rejection of these claims, the Action

relies on column 13, lines 47–63 of Rubino for the disclosure of untrusted party router control.

The relied upon passage states:

FIG. 14 is a logic flow diagram showing the logic steps performed by the Data Path Control Logic 1014 when a PVC is restored. The logic begins in step 1402, and upon receiving the signal indicating that the PVC is restored over the interface 1016, in step 1404, proceeds to determine the logical connection that is associated with the restored PVC, in step 1406. The logic then determines whether the restored PVC is the first restored or active PVC for the logical connection, in step 1408. If the restored PVC is the first restored or active PVC for the logical connection (YES in step 1410), then the logic sends the signal to the Network Layer Logic 1006 over the interface 1018 indicating that the logical connection is restored. However, if the restored PVC is not the first restored or active PVC for the logical connection (NO in step 1410), then no signal is sent to the Network Layer Logic 1006. The logic terminates in step 1499.

This passage, like the passage cited above, also fails to describe a signal indicating that an untrusted party controls a router. Instead, the passage describes the restoration of a failed PVC.

In the restoration process, restored PVCs are not reinstantiated if other PVCs corresponding to a given link are already active. Chaum fails to bridge this gap in Rubino. Therefore, applicant requests reconsideration and withdrawal of the § 103 rejections of claims 17 and 22. Claims 18–21 and claim 23 depend from claims 17 and 22, respectively, and add further limitations thereto. Thus, applicant requests reconsideration and withdrawal of the §103 rejection of claims 18–21 and claim 23.

Similarly, independent claim 33 and amended independent claim 34 are rejected over Rubino in view of U.S. Patent No. 6,397,260 to Wils et al. (“Wils”). Claims 33 and 34 both now recite untrusted party control of a router. The Action again relies upon Rubino for the disclosure of such control. As demonstrated above, the cited portions Rubino fail to teach or suggest such a signal. Wils fails to cure the deficiencies in Rubino. Applicant therefore requests reconsideration and withdrawal of the §103 rejections of claims 33 and 34.

The action separately rejects claim that claim 36 over U.S. Patent No. 6,618,377 to Miriyala ("Miriyala") "as applied to claim 35 above," in view of U.S. Patent No. 5,968,176 to Nessett et al. ("Nessett"). However, claim 35 is rejected over Rubino, not Miriyala. Thus, if the Examiner intends to maintain the rejection of claim 36, applicant requests the Examiner indicate where in Miriyala the recited subject matter of the claim is disclosed. Otherwise, assuming that the action intended to reject claim 36 over Rubino in view of Nessett, applicant requests reconsideration and withdrawal of the rejection for the same reasons cited above with respect to independent claim 35.

Claim 16 Patentably Distinguishes Over Haas

Claim 16 is rejected under 35 USC § 102 over U.S. Patent No. 6,304,556 to Haas ("Haas"). Like the previously discussed claims, claim 16 also recites a signal indicating that an untrusted party has gained control of a router, in this case, a cluster head or a cluster member.

The Action relies upon the following passage from Haas for disclosure of the such subject matter:

The operation of the mobility management protocol is thus as follows. If one of the nodes 52S needs a route to a destination node 52D, the node 52S consults its MRC 54 first. The MRC 54 obtains the location of the destination node 52D by sending the request within the virtual MRC subnet to the other MRC-s 56, 58 and 60. The MRC (or MRC-s in the case of overlap) that "cover(s)" the destination node 52D, in this instance, MRC 60, responds to the querying MRC 54, which, in turn, responds to the querying node 52S. The response is a spine route that consists of three segments: Source node 52S to source MRC 54; source MRC 54 to destination MRC 60; and MRC 60 to the destination node 52D. In principle, the "spine route" could be used as a legitimate route. However, it may not be "optimal." Furthermore, use of spine routes creates points of congestion around the MRC-s and, thus, should be avoided. A spine route can serve, however, as a basis for constructing actual routes. More specifically, the spine route allows one to limit the Route Discovery Procedure in the Zone Routing Protocol(ZRP), described above. In other words, querying of the peripheral nodes will be restricted to only those peripheral nodes that are in the "direction" of the spine

route, as opposed to proceeding in all directions. Thus, the mobility management protocol is used first to locate the destination node and the spine route thereto, after which the ZRP is used in combination with the spine route to locate one or more optimal routes from the source node to the destination node. Note that using the spine route, the number of control messages is drastically reduced. The results of a study of the MRC-based mobility management show significant improvement in the latency of the route discovery mechanism and the volume of control traffic.

Column 9, lines 32–63. The relied upon passage relates to usage of a spine route to reduce the number of control messages a network needs to route data packets. The passage has nothing to do with a signal indicating that an untrusted party has gained control of a cluster head or cluster member. In light of the above, applicant requests reconsideration and withdrawal of the § 102 rejection of claim 16.

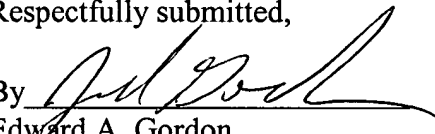
CONCLUSION

In light of the above applicant respectfully submits that all pending claims are patentable over the references, alone or in combination, and requests reconsideration and withdrawal of the §102 and §103 rejections.

Applicant believes no fee is due with this response other than as reflected on the enclosed Fee Transmittal. However, if a fee is due, please charge our Deposit Account No. 18-1945, under Order No. BBNT-P01-007 from which the undersigned is authorized to draw.

Dated: April 4, 2005

Respectfully submitted,

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